

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A telecommunication signal frame comprising
a section overhead (~~SOH~~) with a Regeneration Section OverHead (RSOH) and a
Multiplex Section OverHead (MSOH), and
said RSOH comprising in turn a first byte (~~K1~~) and a second byte (~~K2~~), said first byte
(~~K1~~) comprising bits (~~a_{K15}, a_{K16}, a_{K17}, a_{K18}~~) identifying the destination node and said second byte
(~~K2~~) comprising bits (~~a_{K21}, a_{K22}, a_{K23}, a_{K24}~~) identifying the source node, and
wherein said ~~Multiplex Section OverHead (MSOH)~~ comprises a third byte (~~K0~~)
comprising at least one Source Node IDentification Extension bit (~~a_{K05}, a_{K06}, a_{K03}, a_{K04}, a_{K05}~~), at
least one Destination Node IDentification Extension bit (~~a_{K07}, a_{K08}, a_{K06}, a_{K07}, a_{K08}~~) and at least
one bit (~~a_{K01}, a_{K02}, a_{K03}, a_{K04}, a_{K01}, a_{K02}~~) indicating a change of the information in said at least one
of said first, and/or second and/or third bytes (~~K1, K2, K0~~).

2. (Currently Amended) A frame according to claim 1, wherein said Source Node
IDentification Extension bits (~~a_{K05}, a_{K06}~~) and said Destination Node IDentification Extension,
each comprise two bits (~~a_{K07}, a_{K08}~~) are two in number and said four bits (~~a_{K01}, a_{K02}, a_{K03}, a_{K04}~~)
are allocated to indicating an said information change are four in number.

3. (Currently Amended) A frame according to claim 1, wherein both said Source Node Identification Extension bits (~~a_{K03} , a_{K04} , a_{K05}~~) and said Destination Node Identification Extension bits (~~a_{K06} , a_{K07} , a_{K08}~~) are three bits in number and said bits (~~a_{K01} , a_{K02}~~), indicating an information change are two bits in number.

4. (Currently Amended) A frame according to claim 2, wherein said Source Node Identification Extension bits (~~a_{K05} , a_{K06}~~) are ~~the~~ fifth and sixth bits of the third byte (~~$K0$~~), said Destination Node Identification Extension bits (~~a_{K07} , a_{K08}~~) are ~~the~~ subsequent two ones bits and said bits (~~a_{K01} , a_{K02} , a_{K03} , a_{K04}~~) indicating an information change are ~~the~~ first four ones.

5. (Currently Amended) A frame according to claim 3, wherein said Source Node Identification Extension bits (~~a_{K03} , a_{K04} , a_{K05}~~) are ~~the~~ third, fourth and fifth bits of the third byte (~~$K0$~~), said Destination Node Identification Extension bits (~~a_{K06} , a_{K07} , a_{K08}~~) are ~~the~~ subsequent three ones bits and said bits (~~a_{K01} , a_{K02}~~) indicating an information variation change are ~~the~~ first two ones bits.

6. (Currently Amended) A frame according to claim 1, wherein the third byte (~~$K0$~~) is located at ~~the~~ 9th row, 9th column of ~~the~~ first STM-1 of the frame.

7. (Currently Amended) A method for optimizing the time management of the information carried by a first byte (~~$K1$~~) and a second byte (~~$K2$~~) of ~~the~~ a Multiplex Section

OverHead (MSOH) of ~~the~~ a Section Overhead (SOH) of a telecommunication signal frame and for increasing ~~the~~ a number of nodes in a telecommunications optical ring, comprising:

~~wherein it includes the step of arranging the bits (a_{K01} to a_{K08}) of a third byte ($K0$) of the Multiplex Section OverHead (MDOH) in such a way that at least one of ~~them~~ said bits (a_{K05} , a_{K06} , a_{K03} , a_{K04} , a_{K05}) represents an Extension of the Source Node IDentification and at least one of ~~them~~ said bits (a_{K07} , a_{K08} , a_{K06} , a_{K07} , a_{K08}) represents an Extension of the Destination node IDentification and at least one of the remaining ~~ones~~ bits (a_{K01} , a_{K02} , a_{K03} , a_{K04} , a_{K01} , a_{K02}) indicates an information change in said at least one of said -first, ~~and/or~~ second and/or third bytes ($K1$, $K2$, $K0$).~~

8. (Currently Amended) ~~A~~The method according to claim 7, wherein both said Source Node IDentification Extension bits (a_{K05} , a_{K06}) and said Destination Node IDentification Extension bits (a_{K07} , a_{K08}) are two in number and said bits (a_{K01} , a_{K02} , a_{K03} , a_{K04}) indicating an information change are four in number.

9. (Currently Amended) ~~The~~A method according to claim 7, wherein both said Source Node IDentification Extension bits (a_{K03} , a_{K04} , a_{K05}) and said Destination Node IDentification Extension bits (a_{K06} , a_{K07} , a_{K08}) are three in number and said bits (a_{K01} , a_{K02}) indicating an information change are two in number.

10. (Currently Amended) ~~A~~The -method according to claim 7, wherein, in transmitting the frame, the first and the second bytes (~~K1, K2~~) are sent first and finally the third byte (~~K0~~) is sent.

11. (Currently Amended) ~~The A~~-method according to claim 7, wherein, in receiving the frame, the first and second bytes (~~K1, K2~~) are read if at least one, but preferably all bits (~~a_{K01}, a_{K02}, a_{K03}, a_{K04}, a_{K01}, a_{K02}~~) indicating an information change of the third byte (~~K0~~) are changed and as a result an interrupt is generated.

12. (Currently Amended) ~~A~~The -method according to claim 11, wherein the Destination Node Identification is calculated with the following algorithm:

$$IDDN_{K1+K0} = IDDN_{K1} + 16 * IDDNE_{K0}$$

where: $IDDN_{K1+K0}$ = binary number "extended" Identification of the Destination Node (calculated by using the bits of the first and third byte~~K1 and K0~~); $IDDN_{K1}$ = binary number Identification of the Destination Node (~~bits a_{K15}, a_{K16}, a_{K17}, a_{K18}~~); $IDDNE_{K0}$ = binary number Extension of the Destination Node Identification (~~bits a_{K07}, a_{K08}, a_{K06}, a_{K07}, a_{K08}~~).

13. (Currently Amended) ~~A~~The -method according to claim 11, wherein the Source Node Identification is calculated with the following algorithm:

$$IDSN_{K2+K0} = IDSN_{K2} + 16 * IDSNE_{K0}$$

Where: $IDSN_{K2+K0}$ = binary number Extended IDentification of the Source Node
(calculated by using the bits of ~~K2~~ the second byte and ~~K0~~ the third byte) $IDSN_{K2}$ = binary
number IDentification of the Source Node (bits ~~a_{K21} , a_{K22} , a_{K23} , a_{K24}~~); $IDSNE_{K0}$ = binary number
Extension of the Source Node IDentification (bits ~~a_{K05} , a_{K06} , a_{K03} , a_{K05}~~).

14. (Currently Amended) A computer program comprising ~~computer program code~~
means for adapted to perform implementing the algorithm indicated set forth in claim 12 or 13;
~~when said program is run in a computer.~~

15. (Currently Amended) A computer readable means having a computer program
recorded thereon, said computer readable medium comprising ~~computer program code~~ means for
implementing adapted to perform the algorithm indicated in claim 12, ~~when said program is run~~
~~in a computer.~~

16. (Currently Amended) The use of a third byte (~~K0~~) of a telecommunication signal
frame to manage in an optimized manner ~~the~~ information contained in a first (~~K1~~) and a second
(~~K2~~) bytes of the ~~same~~ frame, wherein said third byte (~~K0~~) comprises at least one Source Node
IDentification Extension bit (~~a_{K05} , a_{K06} , a_{K03} , a_{K04} , a_{K05}~~), at least one Destination Node

Identification Extension bit (~~a_{K07}, a_{K08}, a_{K06}, a_{K07}, a_{K08}~~) and at least one bit (~~a_{K01}, a_{K02}, a_{K03}, a_{K04}, a_{K01}, a_{K02}~~) indicating a change of information in said at least one of first, and/or second and/or third byte (~~K1, K2, K0~~).

17. (New) A method of communicating using a transmission frame, comprising:

producing said transmission frame so as to comprise a section overhead with a
Regeneration Section OverHead (RSOH) and a Multiplex Section OverHead (MSOH),

wherein said RSOH comprising a first byte and a second byte, said first byte comprises
bits identifying the destination node and said second byte comprising bits identifying the source
node, and wherein said MSOH comprises a third byte comprising at least one Source Node
Identification Extension bit, at least one Destination Node Identification Extension bit and at
least one bit indicating a change of the information in said at least one of said first, second and
third byte.

18. (New) The method of communicating using a transmission frame according to claim
17, wherein said Source Node Identification Extension portion and said Destination Node
Identification Extension portion, each comprise two bits and said information change portion
has four bits.

19. (New) The method of communicating using a transmission frame according to claim 17, wherein both said Source Node IDentification Extension portion and said Destination Node IDentification Extension portion have three bits and said indicating an information change portion has two bits.

20. (New) The method of communicating using a transmission frame according to claim 18, wherein said Source Node IDentification Extension portion has fifth and sixth bits of the third byte, said Destination Node IDentification Extension portion has subsequent two bits and said information change portion has first four bits.

21. (New) The method of communicating using a transmission frame according to claim 19, wherein said Source Node IDentification Extension portion has third, fourth and fifth bits of the third byte, said Destination Node IDentification Extension portion has subsequent three bits and said information change portion has first two bits.

22. (New) The method of communicating using a transmission frame according to claim 17, wherein the third byte is located at 9th row, 9th column of first STM-1 of the frame.

23. (New) The method of communicating using a transmission frame:

producing said transmission frame wherein use of a third byte of the frame to manage in an optimized manner information contained in a first and a second byte of the frame, wherein

Amendment Under 37 C.F.R. § 1.111
U.S. Application No.: 09/588,945

Attorney Docket No.: Q59243

said third byte comprises at least one Source Node IDentification Extension bit, at least one Destination Node IDentification Extension bit and at least one bit indicating a change of information in said at least one of first, second and third byte.
